
HPSC 3002
History of the Biological/Medical Sciences
Death, Disease, the Body, and Medicine
Semester 2, 2002

Dr. Hans Pols

Tuesday 10-12; Main Quad S249
Wednesday 1-3; Madsen 410
Office hours: Tuesday 1-3

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Course web-site: <http://www.scifac.usyd.edu.au/~hpols/HPSC3002.html>

Course Description:

In this course, we will investigate the history of disease; the development of medical knowledge; changes in medical practice and their consequences; the rise of the medical profession and medical education; and the position of medicine in society.

Throughout the ages, disease has confronted human beings with the fragility of life and their mortality. The outbreak of epidemics, for example, has always meant that the population would be decimated. Since times memorial, physicians have been asked to care for the sick, alleviate their suffering, and provide cures. Over the past four centuries, knowledge about the causes of disease has increased dramatically, which has led to a great variety of medical interventions. Nevertheless, despite obvious successes in combating disease, new diseases have appeared.

Over the past two centuries, the average life expectancy in the Western world has risen dramatically, while infant mortality rates have decreased. Physicians often claim that improved medical interventions are responsible for this; others claim that it has to do with higher standards of living, better nutrition, laws guaranteeing the purity of food, milk, meat, and water, and the like. How to make further gains in health remains a hotly debated issue.

Advancing medical knowledge and caring for sick individuals has not always gone together easily. Physicians have looked upon their patients as objects for medical research as well as individuals in need of medical care; the tensions between both roles will be explored in a several historical periods, beginning with the demands for corpses for dissection in the Renaissance and ending with attempts to patent human genes.

Recommended Background Reading:

Roy Porter, *The greatest benefit to mankind: A medical history of humanity*. New York: Norton, 1997.

Class Meetings:

Tuesday 10-12; Main Quad S249
Wednesday 1-3; Madsen Tutorial Room 410

Teaching format:

- (1) warm-up and administrative matters;
 - (2) interruptible lecture
 - (3) break
 - (4) discussion (at times in small groups), exercises, etc.
- (disclaimer) this order can be changed at any time.

In class meetings, lecture notes, assignments, and possibly extra readings will be provided. Class attendance is essential.

Office hours

Tuesdays 1-3 or by appointment (call or email). It is always a good idea to plan ahead and discuss your planned presentation and final paper with me as early as possible! I will be available before and after class as well.

The Unit for History and Philosophy of Science

The Unit is located on the fourth floor of the Carslaw Building. The HPS Office (room 441) is open on Mondays from 10-12 and 1:30-2:30; on Tuesdays to Thursdays from 10 to 12. (Opening times may be subject to change.) Members of staff have offices in the department and are available to students at the times advertised on their doors.

Assessment

Components:

- (1) 30%. Reaction papers (ten, approximately 1 DS **typed** page [200 words] each, never more than one per week), following the announcement of exercise for that particular week in class and by e-mail, due at the beginning of the next class.
- (2) 30%. Presentation, and submission of write-up of presentation due the week after your presentation [1,000 words]
- (3) 30%. Final essay 3,000 words.
- (4) 10%. Class participation.

Marking of Assessment

Please note that all grades on returned work are “raw” marks. Marks may be scaled at a later stage to meet faculty guidelines. The following guidelines provide general categories for the way in which you will be assessed:

For a **Pass**, you must complete all of the written assignments and do a presentation, be able to identify and describe the various topics discussed in the course, and present organized oral and written arguments for particular positions.

For a **Credit**, you must do everything required for a pass, plus go beyond mere descriptions of case studies to develop a critical understanding of the nature and the influence of the individuals and approaches discussed.

For a **Distinction/High Distinction**, you must do everything required for a credit, plus be able to draw thoughtful connections between the historical actors, theories, and practices, as well as between their broader social, historical, and political connections.

Course Material on the Web

All material for this course will be available on the course website
<http://www.usyd.edu.au/~hpols/HPSC3002.html>.

Submitting Assessments

All assessment for HPS courses should be handed to the lecturer at the beginning of class or be placed in the secure letterbox provided for this purpose outside the HPS Office, Rm 441 Carslaw Building. Work may also be submitted by mail, addressed to: Unit for HPS, Carslaw Building F07, Sydney University, NSW 2006. Mailed work must be received by the due date. Be sure to indicate on all assessment which course the work is for and the name of the lecturer. Please do not submit your work as e-mail attachments, faxing it to the university, or sliding it under office doors. The Unit takes no responsibility for work submitted in these ways!

Return of Assessment

I will return assessment at the first class after marking. Uncollected work can be picked up from the HPS Office whenever it is open and will be retained for 12 months. Take-home exams are not normally returned.

****Please note that all grades on returned work are raw marks. Marks may be scaled at a later stage to meet the guidelines of the Faculty of Science.****

Extensions

Extra time for assessment is granted only with documented evidence of good cause, such as illness, bereavement or significant cultural events. It is your responsibility to schedule your work through the year so that you do not find one assignment conflicting with another and it is best to think about this early in the semester.

Plagiarism

Sadly, several cases of plagiarism were detected last year. You are encouraged to discuss your work with other students, but the actual written work you submit should be composed by you alone and should adequately acknowledge all written sources by quotation or footnoting. Plagiarism is treated seriously by the university authorities. In this class, any assignment which is plagiarized will receive an automatic grade of zero.

Aims

This unit of study will introduce the most significant transitions in the history of medicine, in particular those related to developments in medical explanations for health and disease; and changes in medical practice. The course aims to explore how disease, medical theories and scientific explanations of disease, medical practice, medical education, the arrangement of medical care, and broader social and political issues are related to each other.

Learning outcomes

By the end of this unit of study, you should be able to:

- (1) Recognize and describe the major advancements in the history of medical knowledge;
- (2) Recognize and describe the major changes in medical practice;
- (3) Discuss and analyze a number of factors which have contributed to health and disease in the past and in the present;
- (4) Discuss and analyze the similarities and differences between the therapeutic and public health approaches to health and disease;
- (5) Discuss and analyze the relationship between the demands of scientific research in medicine and the demands of providing medical care;
- (6) Analyze and discuss the effect of social and political factors on medical care, medical education, and medical research;
- and, finally,
- (7) Present arguments related to the material in this course concisely and convincingly, in written form and as oral presentations.

Course Overview

Week 1.

July 30

First class: Introduction and Organizational Meeting

Video: *The Doctor*. With William Hurt.

July 31

Rough Times in Medical School and the Hospital

Learning to become a physician, perform tests or operations on human bodies, and dealing with disease and death on a daily basis can be very demanding. Here are reflections from a few individuals who went through it.

Readings:

Perri Klass, "The first time," and "Crying in the hospital."

Michael Greger, "Failure to thrive."

Melvin Konner, "A glossary of house officer slang."

Further Reading:

There are many accounts of medical students and physicians about the inhumane conditions that medical students work under. A first in the genre of medical exposes is: Michael Shem, *The house of God* (New York: Marek, 1978). Several classics in medical sociology deal with the socialization of medical students into the profession. See, for example, Howard S. Becker, Blanche Geer, Everett C. Hughes, and Anselm M. Strauss, *Boys in white: Student culture in medical school* (Chicago: University of Chicago Press, 1961). For novelists discussing their experiences in medical school see: Peter Conrad, "Learning to doctor: Reflections on recent accounts of the medical school years," *Journal of Health and Social Behavior* 29 (1988)4: 323-332.

Week 2.

August 6

What is disease?

Does biological science make a distinction between disease and health? If so, how? If not, does it merely depend on our subjective evaluation? How do physicians make that distinctions? And lay people?

Reading:

Lester S. King, "What is disease?"

August 7

Epidemics

Epidemics have been one of the most lethal and frightening manifestations of disease, evoking a wide variety of reactions in the people witnessing and undergoing them. Medical and political measures were often at cross-purposes; at other times they coincided.

Readings:

Guenther B. Risse, "Epidemics and history: Ecological perspectives and social responses."

Ruth Richardson, part of: *Death, dissection and the destitute*, an example of the popular reaction against cholera and dissection.

Week 3.

By this week, you will have given some thought to the presentation you will be giving during this course. Please e-mail me by the end of this week the title of your presentation, a brief description of the content, a few sources you will be using, and the date you preferred to give it. Popular dates go fast!

August 13

Epidemics, continued.

Reading:

Charles E. Rosenberg, *AExplaining epidemics.*@

Further Reading:

Charles E. Rosenberg, *The cholera years: The United States in 1832, 1849, and 1866* (Chicago: University of Chicago Press, 1962); William H. McNeill, *Plagues and peoples* (New York: Anchor, 1977). Laurie Garrett, *The coming plague: Newly emerging diseases in a world out of balance* (New York: Penguin, 1995).

August 14

Therapeutics in the Nineteenth Century and Before

Throughout the ages, physicians have consoled the sick and attempted to restore them to health. Before the 19th century, conceptions of health and disease were radically different than they are today. Consequently, medical practice had different characteristics.

Reading:

Charles Rosenberg, "The therapeutic revolution: Medicine, meaning, and social change in nineteenth-century America."

Further Reading:

With respect to the changes in therapeutics in the nineteenth-century, see John Harley Warner, *The therapeutic perspective: Medical practice, knowledge, and identity in America, 1820-1885* (Cambridge: Harvard University Press, 1986).

Week 4.

August 20

Hospitals

Initially, hospitals were places for the poor to die. Physicians provided some care and could experiment freely on hospitalized patients. The introduction of new therapeutic tools led to several changes.

Reading:

Charles E. Rosenberg, "Ventilation, contagion, and germs," and "The promise of healing: Science in the hospital."

Further Reading:

Guenter B. Risse, *Mending bodies, saving souls: A history of hospitals* (New York: Oxford University Press, 1999).

August 21

The Paris Medical School

The physicians in the Paris hospitals immediately after the French revolution initiated a new approach to medical investigation, in which they attempted to correlate lesions in specific organs with disease patterns observed when the patient was still alive. Only after death could the true cause of illness be ascertained.

Readings:

"The in-patient: The claims of medical science."

William Osler, "An Alabama student."

Further reading:

The classic study on the Paris Medical School is Erwin H. Ackerknecht, *Medicine at the Paris Hospital, 1794-1848* (Baltimore: Johns Hopkins University Press, 1967).

For what American physicians took home from Paris see: John Harley Warner, *Against the spirit of system: The French impulse in nineteenth century American medicine* (Princeton: Princeton University Press, 1998). For the truly ambitious see Michel Foucault, *Birth of the clinic: An archeology of medical perception* (Pantheon 1973).

Week 5.

By this week, you have given some serious thought about the topic of your final paper. By the end of this week, you will have emailed me the topic of your final paper (specifying the time period and geographic area you wish to cover) and some indication of the sources you will be using.

August 27

Body-snatchers, Grave-robbers, and the Trade in Corpses

On 1 August 1832, the English parliament passed an Anatomy Bill which made the bodies of individuals who died in poorhouses available for dissection by anatomy schools. Before that, only the bodies of executed

criminals had been available for that purpose. Consequently, grave-robbers and body-snatchers stalked graveyards and death-houses to steal bodies. Dozens of poor people were killed so that their bodies could be sold to the anatomy schools. Unfortunately, the passing of the Anatomy Act did not change this situation very much.

Reading:

“The Corpse as an Anatomical Object.”

Further Reading:

Medical sociologists have investigated the implicit and explicit socialization processes around training in medicine extensively. They have often focused on the experience in the dissection room. See: Frederic W. Hafferty, “Cadaver stories and the emotional socialization of medical students,” *Journal of Health and Social Behavior* 29 (1988): 344-356; and the work of Renée Fox. For the risks of doing dissections in the past see, for example, this historical novel: Marguerite Yourcenar, *The abyss (Oeuvre au noir)* (London: Weidenfels and Nicholson, 1976).

August 28 Body-snatchers, etc., continued

Reading:

“The Corpse as Commodity,” and “Trading Assassins.”

Week 6.

At this point, the topic of your presentation has been decided and you have informed me about it. In addition, a timeslot has been scheduled for your presentation. If the above does not apply to you, contact me without delay.

Sept 3 The History of Public Health

In the first half of the 19th century, new methods of quantitative and social scientific analysis enabled scientists to analyze the state of health of the population as a whole. This introduced new perspectives on health, disease, death, and the population. Increasingly, the state took responsibility for health.

Reading:

Charles-Edward Amory Winslow, “The great sanitary awakening.”

Dorothy Porter, “Social science and the quantitative analysis of health.”

Further Reading:

For measures undertaken by public health physicians see: Judith Walzer Leavitt, *Typhoid Mary: Captive to the public's health* (Boston: Beacon, 1996).

Sept 4 The History of Public Health, continued

Reading:

Dorothy Porter, “Epidemics and social dislocation in the 19th century,” and “Public health and centralization.”

Week 7.

Sept. 10

Germes

In the 1870s, Louis Pasteur and Robert Koch successfully isolated the microbes linked with a number of deadly diseases. The principle that microorganisms cause specific diseases became generally accepted after that, leading to radically new approaches in medicine and daily life.

Reading:

Nancy Tomes, "Disciples of the laboratory," and "The domestication of the germ."

Sept. 11

Germes, *continued*

Reading:

Nancy Tomes, "Antisepticonscious America."

Further Reading:

For an interesting and alternative view of the importance of the germ theory see: B. Latour, *The pasteurization of France* (Cambridge: Harvard University Press, 1988).

Week 8.

At this point, the topic of your course paper has been decided, and you have provided me with a title, a short outline or abstract, and a short bibliography indicating the source material you are going to use. If the above does not apply to you, contact me without delay.

Sept. 17

Medicine and National Identity: Australia

Medicine has played an unusual role in formulations of the identity of Australia. Could Caucasians live and work in the North of Australia? What kinds of medical measures were necessary to maintain the integrity of the race and the nation?

Readings:

Warwick Anderson, "Geography, race and nation: Remapping 'tropical' Australia, 1890-1930."

Alison Bashford, "'Is white Australia possible?': Race, colonialism and tropical medicine."

Further Reading:

Warwick Anderson, *The cultivation of whiteness: Science, health and racial destiny in Australia* (Melbourne: University of Melbourne Press, 2002).

Sept. 18

Medical Experiments and Human Subjects

Ambitious physicians aim to heal patients and conducted medical research. At times, both tasks can be accomplished at the same time. Most of the time, however, using human beings as guinea pigs in medical research is detrimental to their health. Nevertheless, medical experimentation is necessary for the advancement of medical knowledge.

Reading:

Susan E. Lederer, “‘The sacred cord’: Doctors, patients, and medical research.”

Further Reading:

After World War II, when the nature of medical experimentation in Nazi Germany became widely known, the concern with medical ethics increased dramatically. See: George J. Annas, and Michael A. Grodin, *The Nazi doctors and the Nuremberg code: Human rights in human experimentation* (New York: Oxford, 1992).

Week 9.**Sept. 24****Medical Experimentation, *continued*****Reading:**

Susan E. Lederer, “Heroes and martyrs: Human experimentation in an age of medical progress,” and “Epilogue.”

Sept. 25**Changes in the Nature of Medical Experimentation after World War II**

After World War II, statistical research design involved large random samples from several hospitals became standard in medical research. Conducting research according to these standards required the adoption of standardized diagnostic criteria and research designs.

Reading:

Harry M. Marks, “Managing chance: Statistics and therapeutic experiments, 1950-1960.”

Further Reading:

For a general view on the changing nature of scientific research and the role of quantification see: Theodore Porter, *Trust in numbers: The pursuit of objectivity in science and public life* (Princeton, NJ: Princeton University Press, 1995).

Non-teaching week**Oct. 9, 10****No class****Week 10.****Oct. 8****Research, Medical Care, and Patient Care**

When physicians are focused on research, and when medical care depends on machines, medical tests, and diagnostic technology, the doctor-patient relationship has been altered fundamentally.

Reading:

N.C. Jewson, “The disappearance of the sick-man from medical cosmology, 1770-1870.”

Oct. 9

Public Health II: The History of Mortality

What caused the increase in life expectancy in the Western world during the last 150 years? To what extent can the decrease in death rates be attributed to the increased availability of medical care? To what degree do increase in welfare, wealth, and straightforward public health measures responsible? What is the most efficient way to increase the health of populations? Decreasing poverty? Or making medical care more available?

Reading:

John Cairns, "A history of mortality."

Further Reading:

The classical study that first disputed the role of medicine in increasing life expectancy was: Thomas McKeown, *The role of medicine: Dream, mirage, or nemesis?* (London: Nuffield Provincial Hospital Trust, 1976). For a far more radical view which sees medicine as the cause of disease rather than as a solution see: Ivan Illich, *Medical nemesis: The expropriation of health* (New York: Bantam Books, 1976).

Week 11.

Oct 15

The Continuing Success of Medicine?

After the bacteriological revolution, the widespread use of vaccinations, antiseptic medical procedures, and the introduction of antibiotics, medicine experienced its greatest triumphs over disease. Will medicine continue to be successful in the battle against disease? Or has it become the victim of its own success?

Reading:

Paul Farmer, "The consumption of the poor: Tuberculosis in the late 20th century."

James Le Fanu, "The revolution falters," "The dearth of new drugs," "Technology's failing," "The clinical scientist as an endangered species."

Oct 16

What is the Doctor's Job?

In the past, public health physicians have embraced a variety of social causes, which has led to the criticism that physicians should focus on what they do best: treating illness.

Reading:

Sally Satel, "Public health and the quest for social justice."

Gary Taubes, "Epidemiology faces its limits."

Further Reading:

After World War II, physicians have had extensive discussions about what general practitioners should and not do, under the title of "comprehensive care" or the need to see the "patient as a person." A classic is: Carl Binger, *The doctor's job* (New York: Norton, 1945). See also: Theodore M. Brown, "George Canby Robinson and

‘the patient as a person’,” in: Christopher Lawrence and George Weisz, eds., *Greater than the parts: Holism in biomedicine 1920-1950* (New York: Oxford University Press, 1998), 135-160.

Week 12.

Oct 22

Ambiguous Diseases: Railway Spine

Physicians and laymen have disagreed about the true status of a variety of afflictions that incapacitate human beings, such as chronic fatigue syndrome, shell shock, railway spine, Gulf War syndrome, and Attention Deficit Disorder. The discussions on the true nature of these afflictions reveals the changing standards of medicine.

Reading:

Ralph Harrington, “The neuroses of the railway.”

Eric Caplan, “Trains, brains, and sprains: Railway spine and the origins of the psychoneuroses.”

Further Reading:

For the history of traumatic afflictions see: Mark S. Micale, and Paul Lerner, *Traumatic pasts: History, psychiatry, and trauma in the modern age, 1870-1930* (New York: Cambridge University Press, 2001). For PTSD and related afflictions see: Allan Young, *The harmony of illusions: Inventing post-traumatic stress disorder* (Princeton, NJ: Princeton University Press, 1995).

Oct 23

Ambiguous Diseases II: Chronic Fatigue

Robert A. Aronowitz, “From myalgic encephalitis to Yuppie flu: A history of Chronic Fatigue Syndrome.”

Elaine Showalter, “Chronic Fatigue Syndrome.”

Further reading:

There are several sources on ambiguous diseases and afflictions that at one point were considered imaginary and at another real. See, for example, Robert A. Aronowitz, *Making sense of illness: Science, society, and disease* (New York: Cambridge University Press, 1998).

Week 13.

Oct. 29

Organ Transplantation and the Redefinition of Death

In this essay, an anthropologists discusses how “brain-death” patients are in a border-land between life and death: their organs are alive enough so that they are valuable for transplantation purposes, while the patient is considered dead enough to have his or her organs harvested for transplantation purposes.

Reading:

Margaret Lock, “On dying twice: Culture, technology and the determination of death.”

Video: *The Gene Hunters, I.*

Further Reading:

Margaret Lock, *Twice dead: Organ transplants and the reinvention of death* (Berkeley: University of California Press, 2002).

Oct. 30

The Trade in Tissues and Genes

The commercialization of bio-medicine brings with it a number of risks as well as ethical and legal questions. Can human tissues or their genetic information be appropriated without their consent (or the consent of their next of kin)? How can the trade in tissues and organs be regulated? Who controls access to genetic and health information? It is possible to own or patent genetic sequences?

Reading:

Lori Andrews and Dorothy Nelkin, "Biocommerce: The People in the Body," "The Genetic Gold-rush and the Perils of Patenting."

Week 14.

Nov. 5

The Trade in Tissues and Genes, II

Reading:

Lori Andrews and Dorothy Nelkin, "Bleed and run."

Video: *The Gene Hunters, II.*

Further Reading:

There is an avalanche of publications in magazines and newspapers about patenting genes and the trade in human tissues. In particular the Icelandic gene bank has been discussed extensively.

Nov. 6

Final Class: Concluding Remarks

Final Papers due Today